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AUTHOR Mukavetz, John A.
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ABSTRACT

In order to evaluate proposed institutional goals and objectives at Florissant Valley Community College (Missouri), Osgood's Semantic Differential was used to compare the attitudes of two staff categories, classified employees (secretaries, clerks, etc.) and administrators, toward 12 of the 23 proposed objectives. Out of 100 surveys distributed, 23 were returned, including 13 from classified staff (16 percent), and 10 from administrators (52 percent). This document assesses the degree of consensus between the groups, and determines which objectives were more often perceived as attainable. In Part I, comparisons are made for each objective using the mean total attitude score. In Parts II and III, a more detailed analysis is employed using composite scores to compare the perceived "value" of an objective with its perceived believability or "credibility." This study points out potential problems caused by differences between classified staff and administrators in their overall evaluation of objectives, in the relative importance of objectives to each group, in the relative "credibility gaps" associated with each objective, and in the relationship between these gaps and employment category. Responses are presented in table form, and the survey instrument is appended. (Author/NHM)

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# A COMPARISON OF STAFF ATTITUDES TOWARD PROPOSED PARTICIPATIVE-MANAGEMENT OBJECTIVES IN A PUBLIC 2-YEAR COMMUNITY COLLEGE

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John A. Mukavetz
Director - Office of Institutional Research
St. Louis Community College at Florissant Valley

The present investigation was conducted as a pilot study to determine the feasibility of using Osgood's (1957) Semantic Differential (SD) in the evaluation of proposed institutional goals and objectives being developed in a public 2-year community college. In an effort to improve accountability, and to involve all levels of college staff in a participative-management environment, the college staff began this task approximately eight months prior to the present investigation. Four months later, a list of proposed objectives targeted to students, staff, and the community, were distributed to all college staff members. The Semantic Differential was used to compare the attitudes of two staff categories, Classified employees (secretaries, clerks, etc.) and Administrators, toward 12 of the 23 proposed objectives in order to assess the degree of consensus, and to indicate which objectives would most likely be perceived as attainable.

Osgood, Suci, and Tannenbaum (1957) have defined "attitude" as an acquired (learned) predisposition to respond in an evaluative manner, to approach or avoid, to respond favorably or unfavorably. They describe attitudes as lying on a basic bipolar continuum having a neutral (or zero) reference point, and having quantifiable direction and intensity (p. 189). Numerous factor analytic studies of the meaning of ideas and concepts, using lists of bi-polar adjectives in the Semantic Differential, have demonstrated that nearly any idea or concept can be measured (direction and intensity) along three

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dimensions: evaluation (good-bad), potency (strong-weak), and activity (active-passive). Most of the variance is accounted for by the evaluative dimension, providing a basis for extracting an attitudinal component (Tannenbaum, 1969). The validity and reliability of such SD attitudinal scales appears to be high, based on correlations with more traditional Thurstone, Likert, and Guttman-type scales (Brinton, 1969).

The concept of attitude is central to social psychology and personality theory because it is generally regarded as an important determinant and predictor of behavior (Rokeach, 1972b). Therefore, a measure of staff attitudes toward proposed institutional objectives may be an important predictor of the degree to which persons will cooperate to work toward college objectives, and may also be a useful indicator of their relative probability of success.

## METHOD

### Subjects

The population was limited to classified staff (21 males and 60 females) and administrators (13 males, 6 females). Out of 100 surveys distributed, 23 were returned, including 13 from classified staff (all female) and 10 from administrators (all male).

### Instrument

A semantic differential (see Appendix A) was developed using lists of bi-polar adjectives previously reported by Osgood, Suci, and Tannenbaum (1957), in which each of 12 proposed college-wide objectives were presented on a separate page followed by 10 adjective pairs. Seven of the adjective pairs, identified by Osgood et al (1957) as having high factor loadings on the

evaluative dimension, were used to determine the attitude of subjects toward the objectives. Evaluative pairs were wise-foolish, honest-dishonest, good-bad, valuable-worthless, believable-unbelievable, successful-unsuccessful, and fair-unfair. Three other pairs were used as fillers (hard-soft, strong-weak, active-passive). The positive-negative direction of the scales was alternated to control for possible position preference and response bias.

The proposed college-wide objectives which were used as stimulus items are listed below. Each was prefaced by the generalized statement, "The purpose of the College is to assist all members of the College staff to develop the best of their human potential by:"

1. helping them develop a capacity for critical thinking.
2. helping them develop the ability to make independent judgements.
3. helping them improve their capacity for planning.
4. helping them improve their creativity.
5. helping them improve their capability for communication.
6. helping them with their career development.
7. helping them develop an improved capacity for earning a living.
8. helping them improve their appreciation for points of view different from their own.
9. helping them develop improved abilities for relating to other individuals.
10. encouraging involvement in further educational opportunities.
11. realizing equal consideration.
12. promoting participative decision-making.

Procedure

Appendix A contains examples of the materials which the subjects received, including a cover letter, instructions, and example semantic differential. Subjects were asked to return the survey within one week. Although confidentiality was assured, each survey was unobtrusively coded to determine the respondent's sex and employment classification.

A subject's score on a single objective pair ranged from "1" (extremely favorable) to "7" (extremely unfavorable). The total attitude score for

each objective consisted of the sum of the scores for the 7 evaluative scales and ranged from "7" (most favorable) through "28" (neutral) to "49" (most unfavorable).

Design

Since all Classified respondents were female and all Administrative respondents were male, a within-group comparison by sex was impossible. The design, therefore, was limited to comparisons between Classified staff and Administrators. Because the study was exploratory in nature, to determine if the semantic differential could be useful in the evaluation and development of college-wide objectives, several methods of data analysis were used.

In Part I, comparisons were made for each objective using the mean total attitude score. The significance of differences between means was tested using the t-statistic.

In Part II and Part III, a more detailed analysis was attempted using composite scores to compare the perceived "value" of an objective with its perceived believability or "credibility." This analysis was carried out in response to some subjects' comments that the objectives were good but could not realistically be achieved. The "value" score consisted of the sum of the scores for the scales good-bad and valuable-worthless, while the "credibility" score consisted of the sum of the scores for the scales believeable-unbelievable and successful-unsuccessful. Non-parametric techniques were used for this part of the analysis because of the small sample size, reduced reliability of measurement (from seven scales to four), large within-group variance, and ease of computation.

In Part II, the Friedman Two-Way Analysis of Variance was used to compare "value" and "credibility" scores for each college objective within employment category (Siegel, 1956, p. 166). In the Friedman test, the data are arranged in a two-way table having N rows and k columns. The rows represent Subjects and the columns represent different conditions (dependent value and credibility scores in the present study). The scores in each row are ranked and the statistic $r^2$ (analogous to Chi-Square) is used to determine whether the rank totals (across Subjects) differ significantly.

In Part III, another non-parametric procedure, the Extension of the Median Test (Siegel, 1956, p. 179) was used with a credibility-value difference score to determine whether Classified staff were significantly different from Administrators on each objective. In this test, expected and obtained values of above-median and below-median scores for the two employment groups are compared in a 2 x 2 expectancy table using the Chi-Square statistic.

The following hypotheses were tested:

Part I - $H_1$: For each college objective, the mean total attitude scores of the Classified and Administrative groups are significantly different (2-tailed test).

Part II - $H_2$: For each college objective, the Classified Subjects' rank totals for "value" and "credibility" are significantly different (Friedman Two-Way Analysis of Variance).

$H_3$: For each college objective, the Administrative Subjects' rank totals for "value" and "credibility" are significantly different (Friedman Two-Way Analysis of Variance).

Part III - $H_4$: For each college objective, the distribution of credibility-value difference scores above-median and below-median for the Classified Subjects is significantly different from that of the Administrative Subjects (The Extension of the Median Test).

RESULTS[1]

Part I

The mean total attitude scores of Classified Staff and Administrators and values of t for the difference between means for each college-wide objective are shown in Table 1. Overall, Classified staff had a more favorable attitude (lower mean score) toward all the objectives than did the Administrators.

Table 1. Mean total attitude score for college-wide objectives and values of t (df=21).

| OBJECTIVE | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Classified | 16.69 | 13.38 | 15.61 | 16.61 | 12.46 | 12.69 |
| Administrators | 17.70 | 19.30 | 19.60 | 23.50 | 15.40 | 18.60 |
| t | 0.32 | 1.85** | 1.00 | 1.86** | 1.03 | 1.50 |

| OBJECTIVE | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| Classified | 12.31 | 15.00 | 13.15 | 13.31 | 21.85 | 17.46 |
| Administrators | 20.30 | 18.40 | 18.10 | 17.70 | 23.00 | 22.70 |
| t | 1.78** | 1.43 | 2.14* | 1.05 | 0.27 | 1.33 |

* sig. $P < .05$

** $P < .10$

[1] Raw data and tables for Friedman Two-Way Analyses of Variance and Extension of the Median Tests are available on request, from the author.

However, due to large within-group variances, a significant difference between means was found for only one objective (#9 - "helping them develop improved abilities for relating to other individuals," t=2.14, df=21, $P < .05$). Mean differences approaching significance were found for three other objectives:

#4 - "helping them improve their creativity" (t=1.86, df=21, $P < .10$, n.s.)

#2 - "helping them develop the ability to make independent judgements" (t=1.85, df=21, $P < .10$, n.s.)

#7 - "helping them to develop an improved capacity for earning a living" (t=1.78, df=21, $P < .10$, n.s.).

Simple ranking of mean attitude scores from more favorable (lowest scores) to less favorable (see Table 2) revealed that the most favored Classified objective, #7 (helping them develop an improved capacity for earning a living) was ranked 9th by the Administrators, although both ranked objective #5 (helping them improve their capability for communication) very high (2nd and 1st respectively).

Table 2. Rank of mean total attitude score for college-wide objectives

| RANK | | More Favorable | | | | | | | | | | | Less Favorable |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Objectives | Class. | 7 | 5 | 6 | 9 | 10 | 2 | 8 | 3 | 4 | 1 | 12 | 11 |
| | Admin. | 5 | 10 | 1 | 9 | 8 | 6 | 2 | 3 | 7 | 12 | 11 | 4 |

Similarly, although the Classified staff ranked objective #1 (helping them develop a capacity for critical thinking) 10th, the Administrators ranked

it 3rd. Other differences were less dramatic. The rank order correlation coefficient (Spearman rho = .483) was not significant.

Part II

In Part II, the composite "value" and "credibility" scores were compared for each proposed college-wide objective, using the Friedman Two-Way Analysis of Variance. For both Classified and Administrative staff, for all 12 objectives, the Rank Sums for credibility were larger than for "value," indicating that all objectives were judged to be more valuable (good, valuable) than credible (believable, successful).

For Classified staff, significant differences between value and credibility were found for objectives:

#2. making independent judgements.
#4. improving creativity.
#5. improving capability for communication
#9. improving abilities for relating to other individuals.
#12. promoting participative decision-making.

For Administrators, significant differences were found for objectives:

#1. developing a capacity for critical thinking.
#2. making independent judgements.
#3. improving capacity for planning.
#4. improving creativity.
#7. developing an improved capacity for earning a living.
#8. improving appreciation for different points of view.
#9. improving ability for relating to other individuals.

Thus, "incredibility" was shared by Classified and Administrative staff for objectives:

#2. making independent judgements.
#4. improving creativity.
#9. improving ability for relating to other individuals.

Part III

This analysis attempted to determine whether the differences between "value" and "credibility" found within groups in Part 2 were significantly related

to differences between employment categories, using a "credibility gap" score (credibility-value=difference). For each objective the median difference score was identified. Using the Extension of the Median Test, the observed frequency of difference scores above (+) and below (-) the median was compared with expected values for Classified and Administrative staff in a 2 x 2 contingency table. Significant differences between Classified staff and Administrators were found for only one objective (#2. developing the capacity for making independent judgements), although #3 (planning), #4 (creativity), and #7 (improved capacity to earn a living) approached significance. These objectives appear to be more directly job skill-related. Overall, the Administrators' "credibility gap" score was higher than the Classified staff for objectives #2, 3, 4, 7, 8, 10, 11, and 12.

The Extension of the Median Test determines whether independent groups, in this case Classified and Administrative staff, have been drawn from populations having equal median scores. A significant $\chi^2$ indicates that the median scores (in this case median credibility-value difference scores) of the two groups are significantly different.

DISCUSSION

Overall, the results show that those persons responsible for developing college-wide objectives at the community college under study face an unenviable task. First, Administrators, who may eventually engage in implementation of the objectives, have consistently less favorable attitudes toward them than do the Classified staff. Second, while Administrators valued development of a capacity for critical thinking, this objective was ranked low on the Classified list. Similarly, the Classified

staff's preoccupation with improving their capacity to earn a living was not shared to the same degree by Administrators.

A third indicator of possible trouble ahead was the "credibility gap" score, the less favorable attitudes towards the believability and successfulness of an objective than towards its goodness or value. This somewhat cynical attitude was more prevalent among Administrators, and is probably the result of past experience.

Finally, the trends found in the Part 3 analysis indicated that the magnitude of the credibility gap is related to employment category, especially for objectives which are identifiably job-related.

In summary, although statistical significance was not achieved in all cases, the results support the continued use of the Semantic Differencial technique in the measurement of attitudes toward institutional objectives. The present study has pointed out potential problems caused by differences between Classified staff and Administrators in their overall evaluation of objectives, in the relative importance of objectives to each group, in their relative "credibility gaps" associated with each objective, and in the relationship between these gaps and employment category. That all trend results were consistent emphasizes the power and sensitivity of the SD technique in the measurement of attitudes.

Attitudes are generally regarded as good predictors of behavior. However, many studies have found only weak correlations between verbally expressed (or written) attitudes and overt behavior. Rokeach (1972a) argues that this is an artifact of the situation - specificity of attitudes. Thus,

among deep-rock coal miners, racial segregation existed above ground while integration existed below. Changing behavior in a specific situation may change the attitude toward that situation. In the miners' case, cooperation below ground could mean the difference between life or death.

Osgood's (1971) congruity theory predicts a change in attitude as a result of counter-attitudinal behavior as the individual tries to bring his attitudes into better balance with his behavior. However, when attitude and behavior are in balance, no change in attitudes will occur.

In the community college discussed in the present study, the divergent attitudes between the value of a college-wide objective and the credibility of that objective, may be maintained by a situation (job) - specific set of behavior patterns which have been allowed to become an ingrained characteristic of the institution.

Osgood's congruity theory suggests that an active movement to develop new behavior patterns - an active involvement in the development of students, staff, and the institution - will result in a change in staff (especially Administrators) attitudes in the positive direction and reduce the credibility gap, while itself establishing a new feedback system to revitalize staff and college both.

LIMITATIONS

The present investigation had several deficiencies which may have detracted somewhat from the validity and reliability of the results. Chief among these was the small sample size (23% of the population) and extreme sample bias which made comparison by sex within employment group impossible. The sampling problems were due to a lack of adequate follow-up to maximize responding.

Another deficiency, which may or may not have biased the results was due to the unusual characteristics of the Semantic Differential itself. Classified staff, for example, were particularly reluctant to participate in a study which asked if development of creativity was hard or soft! Hopefully, the continued successful application of the SD technique at the community college in question will change attitudes toward the SD as well.

April, 1976 - mlr

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## APPENDIX A

1. Cover letter to staff
2. Instructions
3. Example Semantic Differential for one objective.

FLORISSANT VALLEY COMMUNITY COLLEGE
MEMORANDUM

TO:

FROM: John Mukavetz

DATE: May 30, 1975

SUBJECT: WHAT DO THE COLLEGE-WIDE OBJECTIVES MEAN TO YOU?

Several months ago, you received a list of proposed College-wide objectives. In order to find out what these objectives mean to you personally, to find out how you as an individual feel about them, I am asking you to fill out the attached survey, and return it to me anonymously by June 6, 1975.

The survey instrument is the Semantic Differential, developed by Osgood, Suci, & Tannenbaum (1964), which has been shown in studies at numerous colleges and universities, to be a sensitive and reliable measure of the meaning of ideas. The first page following this letter contains the instructions, taken directly from Osgood's book, The Measurement of Meaning.

At the top of each following page is a College-wide objective followed by 10 semantic scales. As described in the instructions, you would place a mark on each scale at the point you feel the objective belongs. If you feel that the scale does not seem relevant to the objective, you would place a mark in the middle space. Your first impressions are most important.

There are 23 objectives in the survey. It should take between 15 and 20 minutes to fill out. I'll be calling each of you to answer any questions you might have, and to thank you for your help.

JM/mlr

The purpose of this study is to measure the meaning of some of the College-wide objectives which were distributed to all staff members. Please make your judgements on the basis of what these things mean to you.

At the top of each page of this booklet you will find a different objective to be judged. Under each objective is a set of scales. Please rate each objective on each of these scales.

Here is how you are to use these scales:

If you feel that the objective at the top of the page is very closely related to one end of the scale, you should place your check-mark as follows:

fair__X_:____:____:____:____:____:____unfair

or

fair____:____:____:____:____:____:_X_unfair

If you feel that the objective is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

strong____:_X_:____:____:____:____:____weak

or

strong____:____:____:____:____:_X_:____weak

If the objective seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

active____:____:_X_:____:____:____:____passive

or

active____:____:____:____:_X_:____:____passive

If you consider the objective to be neutral on the scale, both sides of the scale equally associated with the objective, or if the scale is completely irrelevant, unrelated to the objective, then you should place your check-mark in the middle space:

safe____:____:____:_X_:____:____:____dangerous

IMPORTANT: (1) Place your check-marks in the middle of spaces, not on the boundaries:

| | This | Not This |
|---|---|---|
| ____:____:____: | X | :____X____:____ |

(2) Be sure you check every scale for every objective - do not omit any.
(3) Never put more than one check-mark on a single scale.
(4) Make each item a separate and independent judgement.

Work rapidly. Do not worry about individual items. It is your first impressions, your immediate feelings about the items, that are important.

The purpose of the College is to assist all members of the College staff to develop the best of their human potential by:

helping them develop their capacity for critical thinking

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. | Hard | ____ | ____ | ____ | ____ | ____ | ____ | ____ Soft |
| 2. | Foolish | ____ | ____ | ____ | ____ | ____ | ____ | ____ Wise |
| 3. | Honest | ____ | ____ | ____ | ____ | ____ | ____ | ____ Dishonest |
| 4. | Bad | ____ | ____ | ____ | ____ | ____ | ____ | ____ Good |
| 5. | Valuable | ____ | ____ | ____ | ____ | ____ | ____ | ____ Worthless |
| 6. | Unbelievable | ____ | ____ | ____ | ____ | ____ | ____ | ____ Believable |
| 7. | Strong | ____ | ____ | ____ | ____ | ____ | ____ | ____ Weak |
| 8. | Unsuccessful | ____ | ____ | ____ | ____ | ____ | ____ | ____ Successful |
| 9. | Fair | ____ | ____ | ____ | ____ | ____ | ____ | ____ Unfair |
| 10. | Passive | ____ | ____ | ____ | ____ | ____ | ____ | ____ Active |

UNIVERSITY OF CALIF.
LOS ANGELES

JUN 25 1976

CLEARINGHOUSE FOR
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